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U.S. Social Security surpluses: pitfall or opportunity?, 1

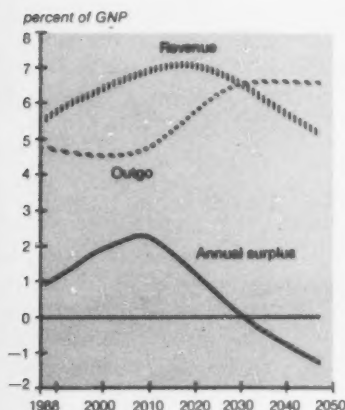
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Chart 1

The Social Security surplus*



*Projections by Social Security trustees based on current law and intermediate demographic and economic assumptions (variant IIB). Both revenue and surplus include interest earned on the trust funds.

U.S. Social Security surpluses: pitfall or opportunity?

The burgeoning surplus of the U.S. Social Security system has come to the fore this year as the latest temptation to procrastinate on decisive measures to cut the federal budget deficit. Under current law, the system surplus should rise from a projected \$37 billion in the current fiscal year to almost \$500 billion by 2015 — over 2% of GNP at that time (see Chart 1). More immediately, the projected \$25 billion increase in the surplus between FY1987 and the new fiscal year beginning this October more than accounts for the \$15 billion narrowing expected over the period in the federal budget deficit (unified basis). Further, the increase in the Social Security surplus alone should provide more than one-third of the \$150 billion budget deficit reduction targeted by FY1993 under the Gramm-Rudman-Hollings (GRH) legislation.* Beyond FY1993 — assuming GRH compliance — there should

be a large and growing budget surplus (see Table 1). That alluring prospect, so different from today's dreary deficit reality, already is inspiring some members of Congress to rush forward new spending schemes.

The Social Security outlook is not the only source of complacency on the budget issue. April's drop in the U.S. trade deficit, to below \$10 billion CIF, plus the upgrading of mainstream forecasts for U.S. real GNP growth this year, to above 3.5%, suggest that the external imbalance is on its way to correction with no sacrifice of growth. To date, growth and trade adjustment also have been consistent with a fairly stable underlying inflation rate since the economy's resources have not been unduly pressured. Now, however, the combination of strong external and domestic demand has brought the economy close to full employment and full capacity utilization in a number of sectors. From here on, substantial further trade correction, which will have to be mainly export-driven, requires domestic demand re-

*The GRH targets are based on the "unified" budget — that is, they include the "off-budget" expenditures and receipts of the Social Security system, as well as "on-budget" items such as defense, income taxes, and Medicare.

Table 1

Social Security and the Gramm-Rudman-Hollings federal budget targets
billions of dollars

Fiscal years	Balances		
	Target, unified basis	Social Security	Implied on-budget
1987	-150	20	-170
1988	-144	37	-181
1989	-136	44	-180
1990	-100	54	-154
1991	-84	82	-126
1992	-20	70	-90
1993	0	78	-78
1996	120	120	0*

*Assumes the 1989-93 trend in on-budget cuts continues.

straint to free up resources.

The financial markets plainly crave enlightenment on just how the next Administration and Congress will seek to remedy the twin deficits within the next presidential term. The burden cannot be off-loaded onto the Federal Reserve, for while monetary restraint can in principle force down the trade deficit, it would be at the cost of economic growth and employment. Instead, as detailed in the last issue of this publication,* the constructive answer lies through resolute fiscal action, assisted if need be by easier monetary policy to keep the dollar competitive. This course would make room, and provide the incentive, for noninflationary trade correction.

In light of the twin deficit connection, the temptation to squander the looming Social Security surpluses for immediate gain must be strenuously resisted. That the temptation is strong is apparent from the pressure for increased spending, notably on "Medicare" health insurance for the elderly. Yet the federal budget already is absorbing almost half of net private savings, leaving net domestic saving at an average of just 3% of GNP in the 1980s so far, and an improvident 1.9% in 1987. To splurge on Medicare or otherwise fall short of the GRH budget targets would leave the savings shortfall unattended, plunge the nation deeper into foreign debt, heighten financial risks, and undermine U.S. standing around the world.

Longer term, the path of profligacy would defeat the whole purpose of Social Security. Spending the surplus would leave the U.S. economy underinvested and

ill-prepared to face the massive retirement and health care burden that will arise in the 21st century as today's baby-boom generation exits from the workforce. Social Security would turn out to be a mere paper promise.

Instead, with careful husbandry, Social Security surpluses present an unequalled opportunity to boost the U.S. net savings and investment rates, perhaps to as much as 8% of GNP—a level not achieved since the mid-1960s but necessary to provide for the future prosperity of both retirees and the working population (see Table 2). This requires compliance with the GRH targets, effective containment of Medicare entitlements (especially for future beneficiaries), and productive investment of Social Security surpluses. A partial privatization of the Social Security system could help, lest the incipient surpluses be frittered away or mismanaged. Wisely handled, Social Security surpluses could make a dramatic difference for U.S. economic prospects. Higher domestic saving not only would help eliminate the trade and current account deficits, and the associated dependence on foreign saving, but also would build up the nation's productive capital stock. That is the only convincing assurance of retirement security.

Evolution of Social Security

The U.S. Social Security system has had a turbulent history of changing priorities. Launched in 1935 as a narrowly defined pension and insurance plan, it was placed outside the budget and its receipts were supposed to be held in trust for future beneficiaries. Thus, like a private pen-

Table 2

The payoff from saving

	Net domestic saving, percent of GNP	Real GNP growth per capita, percent per annum
Actual, 1980-87	3.1	1.3
Projected, 2000-2020		
Official projection*	6.0	1.4
Optimal policy**	8.5	2.0

*Implied by intermediate growth assumptions of the Social Security trustees.

**GRH compliance, Medicare solvency, and productive investment of Social Security surpluses.

*"Reducing the twin U.S. deficits," *World Financial Markets*, 1988 Issue 2.

Chart 2

Payroll tax rates

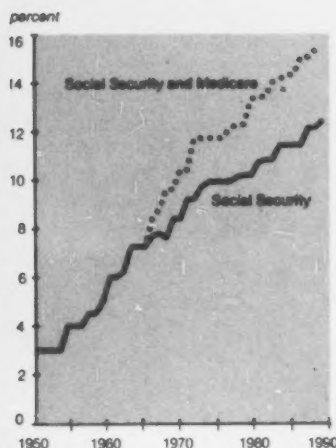
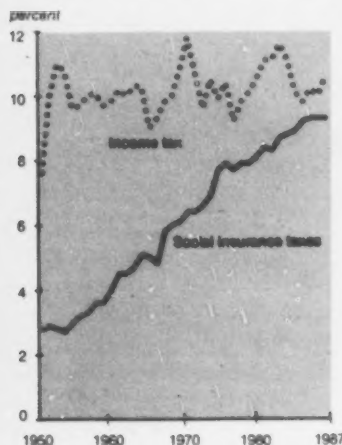


Chart 3

Average personal tax rates*



*Collections divided by personal income. Social insurance taxes include Social Security and Medicare, as well as contributions to the federal employee retirement funds.

sion plan, the system was to pay contributors a fair rate of return and be fully funded.

Almost from its inception, however, the system was changed to a "pay-as-you-go" basis, with current workers' tax payments funding the benefits of retirees. The switch reflected broadened objectives. First, to preclude fiscal drag, it was decided that funds drawn out of the economy should be immediately returned to the spending stream. Second, benefits were extended to many who had not contributed, including the first generation of retirees who were "grandfathered" into the system. Thereafter, over time, benefits were extended to many workers not initially covered, to the disabled, and to a variety of dependents; retirement eligibility rules were loosened; and, in 1972 benefits were indexed to the cost of living. In addition, 1966 saw the introduction of "Medicare" health insurance, which is closely associated with Social Security in its means of financing and beneficiary class but is treated separately for budgetary purposes.

Social Security and Medicare payroll taxes under the Federal Insurance Contributions Act (FICA) have increased in step with benefits. The original law called for a tax on wage and salary income of 1% each on employee and employer. Today, the employee tax is made up of a 6.06% tax for Old Age Survivors and Disability Insurance (OASDI) and 1.45% for Medicare, with the employer contributing a like amount to yield a total tax rate of 15.02% (see Chart 2). Moreover, the payroll tax base has been steadily increased, with levies on labor income up to a ceiling currently set at \$45,000 per annum — a

near-sixfold increase since 1970. Altogether, the system's expansion has meant that the payroll tax now generates nearly as much revenue as the federal income tax (see Charts 3 and 4), while Social Security and Medicare outlays exceed the defense budget.

Amid the current reports of growing surpluses it is easy to forget that the system was close to bankruptcy five years ago. The rapid expansion of benefits and taxes proved workable as long as the labor force was growing relative to the overall population and the economy was robust. By 1981, however, the slowdown in the economy and the pickup in inflation had cut payroll tax collections sharply relative to outlays. As a result, the OASDI trust funds had fallen to the brink of insolvency.

The system was rescued in 1983 through a series of reforms proposed by a special commission headed by Alan Greenspan. The Greenspan Commission recommended a mix of benefit cuts and revenue enhancements. On the revenue side, the payroll tax was increased — it will reach 15.3% by 1990 — and half the benefits were made taxable for middle- and upper-income recipients. On the expenditure side, the annual cost-of-living increase was permanently delayed by six months and the retirement age for full benefits was set to rise to 67 by the year 2027. These adjustments have led to the current surpluses.

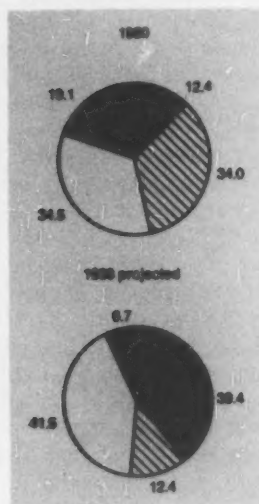
The need for surpluses

The Greenspan reform not only put the system back on its feet, but also aimed to keep it solvent for the next 75 years. The system

Chart 4

Shares of gross federal receipts*

percent of total



- Social insurance
- ▨ Corporate profits
- Personal income tax
- Other

*NIPA basis.

Table 3

Social Security surpluses
percent of GNP

	1980-85	1986
United States	0.1	0.5
Canada	0.8	0.6
Japan	2.8	2.8
Germany	0.2	0.5
France	0.4	-0.3
Italy	0.1	0.1
United Kingdom	0.1	0.1
Denmark	1.2	1.4
Sweden	2.9	2.5*

*1985.

Source: OECD.

has moved away from the pay-as-you-go basis on which it had previously relied and on which other industrial countries with a few exceptions continue to rely (see Table 3). While most of the U.S. payroll tax will continue to support current retirees, a growing portion will be accumulated as reserves of the Social Security trust funds. By 2030, under current law, the accumulated reserves could reach almost \$12 trillion. Thereafter, they would run down to the point of exhaustion around mid-century.

The need for these reserves stems from powerful demographic forces shaping the long-term U.S. outlook. Early in the next century, the labor market will be squeezed from two directions: not only will the retired population swell as baby boomers reach retirement age, but the working population will shrink as the "baby-bust" generation begins to dominate the labor force. As a result, the ratio of retirees to working age population will almost double (see Chart 5). In the period 2010 to 2030 Social Security outlays will grow 40% faster than the payroll tax base.

Social Security may be likened to a benevolent "Ponzi" (pyramid) scheme. Each new generation pays for the older generation's retirement, relying on subsequent generations to do the same. Furthermore, each generation receives more than it pays in as long as the newer groups are willing to "up the ante." But any pyramid scheme will unravel if the pool of contributors fails to expand sufficiently fast. This could well be the case with Social Security. Chart 6 shows how the share of the adult U.S. population in various age groups is expected to evolve over time. This population

pyramid shows an increasingly top-heavy structure as the prime-age population (aged 25-54) shrinks relative to the older population.*

The system differs from the classic Ponzi scheme in one important respect, the enforcement mechanism. Sheer voting power will tend to ensure that the older generation can enforce the contract implicit in Social Security. Even so, to support the top-heavy population structure in prospect, the Social Security system itself needs a credible prop. That is the essential function of the surpluses programmed by the Greenspan reform.

Policy courses to avoid

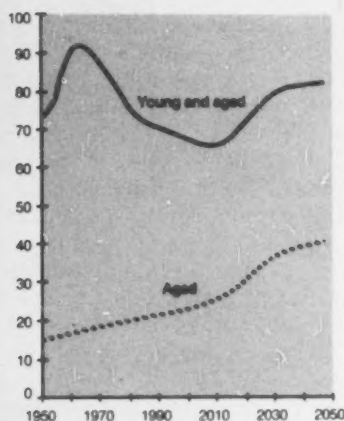
Inasmuch as Social Security surpluses are set to siphon off increasing amounts of spending power, they pose at least a theoretical risk of "fiscal drag." Critics of the surpluses go so far as to warn that the surpluses could cripple the economy, and thus be self-defeating.

In fact, the fiscal drag allegation is a red herring that can only distract policymakers from the real issues. The seemingly huge numbers involved are actually quite small when put in proper context. Although the surplus could climb as high as \$500 billion in 2015, it would represent

*In principle, increased immigration could offset the decline in the prime-aged population. But unless the immigration is specially tailored to highly productive, young workers, it is unlikely to help much. Estimates in the Greenspan report suggest that an additional 100,000 immigrants per year would strengthen the long-run balance of the system by 0.1% of the taxable payroll. To make a significant dent in the Social Security problem would require more than doubling immigration — legal and otherwise — to over 1.5 million per year. At this rate most U.S. population growth would be due to immigration.

Chart 5

Young and aged as percent of working-age population*



*Young, age 0-19; aged, 65+; working-age, 20-64.

only 2.1% of that year's GNP. To be sure, if the on-line federal budget is balanced at that time, the cumulative tightening of the federal position would amount to some 5.5% of GNP relative to the current stance. In determining the possible drag on GNP growth, however, the cumulative change in the fiscal position is less important than the annual change. The annual change associated with the Social Security trend would never exceed 0.2% of GNP, far short of the approximately 0.9% annual cuts required to meet the GRH targets. Besides, any short-run difficulties in recycling the surplus can be overcome with a proper mix of monetary policy and investment incentives. Furthermore, the government still would be free to use temporary deficits in the on-line budget to counter swings in the economy.

Although the fiscal drag related to Social Security poses no serious risk to the economy, it does help justify politically motivated "solutions" to the surplus. Three proposals have been made: the surplus could be used to fund higher government spending, pay for the growth in Medicare, or cut the payroll tax. These solutions would eliminate the fiscal drag problem but ultimately would jeopardize the Social Security system and the future health of the economy.

The politically tempting solution also would be the most damaging. As the surplus accumulates over the next twenty years, Congress could give in to pressure to fund new, more generous benefits. This use of the surplus could drive the average replacement rate — the ratio of benefits to previous income — almost 30% higher than under the current policy.

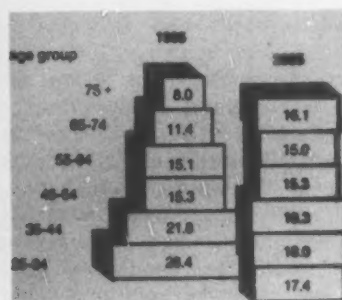
Such a benefit binge, however, would create unmanageable problems once baby boomers begin retiring around 2010. Conceivably, balance could be restored at that time by cutting outlays. This would require not only rescinding the assumed benefit increases of the next twenty years, but also lowering replacement rates below those enjoyed by the generation retired today. The sheer voting power of the baby-boom cohort makes this an unlikely outcome. The more likely policy response would be a mix of unpalatable alternatives: jacking up the payroll tax as much as eight percentage points (see Chart 7) or running outside deficits.

At the extreme, suppose that that GRH mandate is not carried out; the Social Security surplus is used to fund a benefit binge or other programs which become built into the system; and no efforts are made to reform Medicare. The consequential rise in borrowing could absorb more than half of net private saving by 2010, with both the on-line budget and the Medicare trust fund in deficit (see Table 4). Twenty years later, the situation would be out of control: in the absence of new taxes or spending cuts the government deficit actually could exceed private saving.* With the labor force stagnant and no net investment,

Chart 6

The population "pyramid"

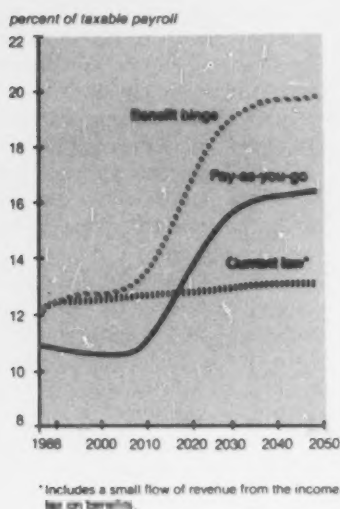
percent of population aged twenty-five and over



*For simplicity, these projections assume that, over a long period, there are no sustained capital inflows or outflows and that net private saving continues at its historical rate of about 6%. In reality, saving patterns are sensitive to demographic changes. Baby boomers, who are now entering their thirties and forties, are prone to save more as they leave behind the initial cost of forming new households and begin to prepare for their children's education and their own retirement. Most of the increase in saving by baby boomers, however, is likely to be offset by the reduced saving of a growing number of retirees.

Chart 7

Social Security revenue requirements



real GNP growth could grind to a halt.

Awareness of this long-term peril probably will keep the United States from adopting so profligate a course. Even so, the presence of a rising Social Security surplus is prone to spawn compromises falling short on the implicit GRH target for the on-line accounts. Already, Congress has been considering a number of proposals for expanding Medicare (see next article) and will be tempted to use the Social Security surplus to fund them. The outcome might leave the unified budget in deficit by \$50 billion or so in FY1993, deferring elimination of the deficit till near the end of the decade and achieving at best modest surpluses during the early years of the next century.

Such a policy of borrowing from Peter's savings to pay Paul's medical bills would create almost the same financing problems as a benefit binge. Were growth in Medicare outlays to exceed current-law projections by 2.2 percentage points annually over the next fifteen years, and were such growth to be financed

by the retirement fund, the combined systems would start accumulating deficits with a vengeance beyond 2010. New higher medical bills would pile on top of unfunded retirement benefits, burying the relatively small number of taxpayers. By 2020 the combined shortfall would reach 3% of GNP, rise to 4% in 2040, and further accelerate beyond (see Chart 8). Economic growth might not cease, but would provide little scope for continued improvement in living standards.

Rather than spend the Social Security surplus, a third proposal would be to return to the old pay-as-you-go system, cutting the payroll tax to avoid accumulating a surplus. By 2010, when the demands on the system begin to escalate, the payroll tax could be increased step-for-step. The cumulative increase to cover retirement benefits could be as much as 6 percentage points. Were the tax also increased to expand Medicare entitlements, the tolerance of the working population would be sorely strained.

It would be a serious mistake to defer until the next century the hard budget choices necessary to deal with the retirement and health care burden. Spending cuts or tax increases then would have to be undertaken amid slowing economic growth, thanks to drastically reduced labor force growth (see Table 5). Middle-of-the-road estimates by the Social Security Administration show labor force growth declining from a current rate of 1.5% to about 0.5% in 2010. That could depress real GNP growth below 2% annually. Even that figure could be optimistic, given that the official projections assume significant rebounds in both the fertility rate and real wage

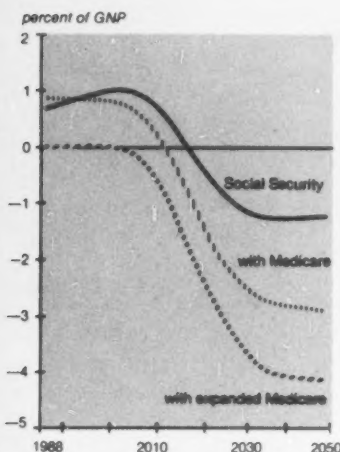
Table 4
Sources of net U.S. saving*
percent of GNP

	Private	Federal government			Total
		On-budget	Social Security	Medicare	
Actual 1980-87	7.1	-4.2	0.1	0.1	3.1
Policy choices					
Benefit binge					
2010	6.0	-3.0	0.0	-1.0	2.0
2030	6.0	-3.0	-4.0	-2.5	-3.0
Compromise					
2010	6.0	-2.0	2.0	-2.0	4.0
2030	6.0	-2.0	-2.0	-4.0	-2.0
Optimal					
2010	6.0	0.0	2.5	0.0	8.5
2030	6.0	0.0	0.5	0.0	6.5

*Social Security and Medicare projections account for feedback between the budget and the economy. "Private" includes state and local government surpluses.

Chart 2

Combined operating surpluses*



*Tax revenue minus outgo, excludes interest paid on trust fund assets and liabilities.

Table 5

Official U.S. economic assumptions* percent change

	1990	2010	2030	2050
Working-age population	0.9	0.6	0.2	0.0
Real GNP	2.9	1.9	1.7	1.6
Consumer prices	4.3	4.0	4.0	4.0
Interest rate**	8.9	6.0	6.0	6.0
(percent per annum)				

*Projections of the Social Security trustees under current law with intermediate assumptions ("II B").

**Rate earned on assets of the Social Security trust funds.

growth relative to the experience of the last twenty years (see Table 6). Neither rebound can be taken for granted.

Saving for investment: the bottom line

The prospective growth shortfall highlights the fundamental problem with most "solutions" for the Social Security problem: their implications for saving, investment, and GNP growth. When the economy is operating at or near full employment, government deficits draw savings out of the private sector, either "crowding out" private investment or requiring that it be financed by net capital inflows from abroad. U.S. net private saving was 4.3% of GNP last year, but government borrowing of 2.4% cut the net domestic savings rate to only 1.9%. Net domestic investment was considerably higher, at 5.3% of GNP, thanks to the capital inflows that covered the nation's \$154 billion external deficit on current account. It is unlikely, for both economic and political reasons, that this high pace of net foreign inflows could be sustained through coming decades. In any case, foreign inflows increase foreign claims on future U.S. output. Inadequate domestic saving therefore would hurt future U.S. generations by reducing the stock of productive assets they inherit.

For that reason, the ultimate objective of a well-conceived Social Security policy is not merely to provide for retirement financing, but also to set aside real resources for the future. After all, the larger the economic pie as a whole, the easier it should be to assure the next century's retirees the increasing slice that their numbers and intergenera-

tional equity will demand.

More than anything, a larger pie requires higher investment. The dramatic improvement that an effective domestic saving and investment effort can make is evident in the "optimal" policy scenario (see Tables 4 and 7). This would avoid all the mistakes of the "benefit binge" or "compromise" scenarios: GRH targets would be met on schedule, reforms in Social Security and Medicare would be implemented keeping the combined system solvent, and an overall budget surplus equal to the Social Security surplus would be productively invested.

With this optimal policy the unified budget would swing from a deficit of 3.4% of GNP in FY1987 to a peak surplus of 2.4% in 2010, pushing up the overall net domestic savings rate to over 8% of GNP in 2000-2020. Thereafter, saving would decline upon the reemergence of Social Security deficits. Nevertheless, with the budget under control, the net savings rate would remain above its 1987 level, in turn engendering a "virtuous circle." Increased investment would lift real GNP and tax revenues, making a still larger surplus available for investment. Conservative estimates show that GNP growth would be boosted an average of 0.6 percentage points annually relative to the official projection of the Social Security trustees. Taxable incomes would be higher in consequence, increasing the assets of the trust funds and making possible, if so desired, higher benefits to retirees. Altogether, there would be a larger economic pie to share among growing demands — provided the Social Security surplus is productively invested.

Table 6

Sensitivity of Social Security tax to assumptions
percent per annum

	Fertility rate*	Real wage growth	Inflation-adjusted interest rate
Actual			
1960-73	2.8	1.5	1.7
1974-79	1.8	0.3	-0.2
1980-87	1.8	0.9	5.3
Long-term projections			
Official	1.9	1.4	2.0
Alternative	1.6	0.9	3.0
Impact on payroll tax rate in 2010**	1.0	0.5	-0.5

*Average number of children born to women who reach reproductive age.

**Percentage point change to yield same revenue as projected on the middle-of-the-road official assumptions.

Table 7

Policy payoffs

	Year in which Social Security	
	Goes into deficit	Runs out of money
Policy choices		
Official projection	2030	2048
Benefit binge	2008	2013
Compromise	2010	2015
Optimal	2036	2051
	Annual average real GNP growth	
	Rate	Per capita
Actual, 1980-87	2.3	1.3
Projected, 2000-2020		
Official projection	1.9	1.4
Benefit binge	1.0	0.5
Compromise	1.5	1.0
Optimal	2.5	2.0

Investing the surplus

How to assure productive investment of the U.S. Social Security surplus has received scant attention in the popular debate, yet is an issue crucial to the viability of the system.

The simplest investment options carry the greatest risk. Under current law, the surplus must be invested in government securities. However, this does not constitute productive investment if it merely encourages the government to "borrow" from Social Security to cover on-line budget outlays, except to the extent that these outlays themselves constitute productive investment. Obviously, with a change in the law, the U.S. surplus could be used to fund public investment directly. This would parallel practice in Japan, whose sizable and long-standing social security surpluses finance investments by public corporations. Going one step further, the U.S. surplus might even be used to support an expanded "industrial policy," targeting loans for investment by deserving private businesses.

Would such public or publicly directed investment be productive? The federal government already engages in a host of lending activities. Certainly too, the United States could use more infrastructure such as better roads and bridges as well as nursing homes and hospitals. The risk in such projects, however, is that the funds may be used inefficiently, either poorly managed or diverted to current spending. Any shortfall in the return on these projects would have to be made up in the future through higher taxes.

These risks, which apply to all public capital programs, cast

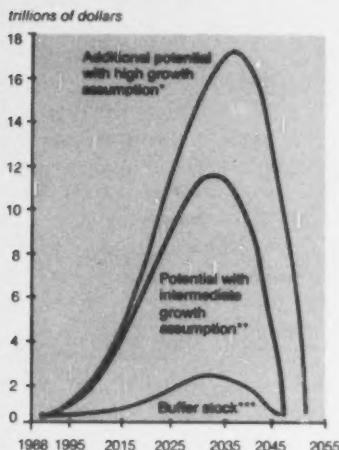
doubt on current proposals to divide all federal government accounts into distinct capital and operating budgets. This is the practice of private business, lower levels of government in the United States, and most foreign governments. Typically, borrowing is considered permissible to cover part of the capital budget, but not the operating budget. The problem is that there is an ever-present temptation to hide maintenance and consumption outlays in the capital budget. Furthermore, the aura of virtue surrounding "capital" outlays shields them from rigorous scrutiny, resulting in a poor rate of return in many instances. In sum, earmarking the Social Security surplus to finance public capital items would do little to ensure its productive investment.

The danger that the surplus will be dissipated bolsters the case for removing all or part from the political arena through some form of privatization. Of course, purely voluntary, private provision for retirement is a political nonstarter. It would require an enormous "buy-out," running to several trillions of dollars, to preserve benefits to current retirees. Besides, unlike a private pension, Social Security provides an income maintenance system for low-income retirees. Much of the payroll tax constitutes a form of forced saving for people who otherwise would make inadequate individual provision for retirement. Plainly, private saving alone cannot meet the objectives of Social Security.

The best solution could be to privatize just the surplus portion of Social Security revenues, perhaps along the following lines. Until 1990 the surplus would continue to be invested solely in government securities, building

Chart 9

Privatization potential of Social Security assets



* With optimal saving, investment, and growth performance as projected in Tables 4 and 7

** Under assumptions of the Social Security trustees

*** Prudent minimum to be retained in official fund, set at one year's system outgo through 2030, thereafter drawn down in step with total assets.

up a buffer stock holding of about \$300 billion. Starting in 1990 Social Security contributors would be allowed to divert, say, 2 percentage points of their payroll tax to individual investment accounts. The percentage point diversion would be redetermined periodically in light of experience with the take-up rate; the intent would be to maintain the official buffer stock holding at a level on the order of one year's outgo, enough to cover any unanticipated shortfall in the system. This partial privatization would continue until the system stops running large surpluses, which is projected to occur around 2020.

For the typical taxpayer the diversion would amount to about \$500 to \$1000 per year, measured in 1987 dollars. The funds would be restricted to pre-approved investment accounts, similar to today's Individual Retirement Accounts (IRAs) but subject to tougher tests of investment suitability and tighter restraints on early withdrawals. Upon retirement, the individual would receive public benefits lower than under current law but would supplement them by drawing on the private accounts.*

This privatization scheme would ensure that most of the Social Security reserve is productively invested. For example, based on official projections the total reserve should reach about

\$9 trillion in 2020. Under privatization about 80% of the total would be diverted to private accounts. And a substantially greater sum would be held in the private accounts were the high-growth "optimal" policy scenario also to be followed (see Chart 9). By taking most of the assets out of government hands, this scheme would help depoliticize Social Security. It would not only reduce the risk that the funds would be diverted to other uses, but also help assure future retirees that some of the benefits the system promises today will be forthcoming at their time of need.

Financial market implications

Beyond their consequences for U.S. economic growth and living standards, the budget decisions made — or not made — in the years ahead will have profound implications for both domestic and international capital markets.

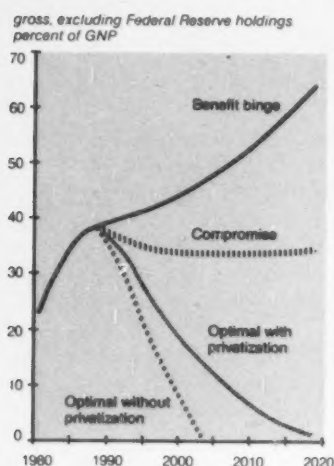
If the federal government adheres to the Gramm-Rudman-Hollings deficit targets, holds the line on new programs, and invests the Social Security surplus as current law requires, the ramifications are startling.

For example, the trust funds could absorb all outstanding federal debt by the year 2005. That would force a change in the way U.S. monetary policy is conducted. With few or even no government bonds available to buy on the open market, the Federal Reserve could not maintain its present operating procedure. This need be no calamity, since the authorities have other means to exercise monetary control. Among them are changing reserve requirements and discount window policy. Both these tech-

*Each individual's public benefit would be lowered by an actuarially determined figure based on the amount of payroll tax diversion plus interest this would have earned had it remained in the trust fund. To the extent that the private accounts earn a higher yield, the individual would receive greater benefits through privatization. For an individual contributing regularly and earning one percentage point additional yield, the value of a private account after thirty years would be about 10% higher than that of the government alternative.

Chart 10

Publicly held federal debt



niques have the disadvantage of rather limited flexibility. Instead, there should in principle be no objection to conducting open market operations through purchase or sale of liquid commercial paper and other private debt instruments. The Federal Reserve did this earlier in its history and it is today a normal practice on the part of the Bank of England, the Bank of Japan, and the Bundesbank.

Of course, sustained fiscal discipline is hardly certain. More likely, political compromise will eventually yield something approaching a balanced federal budget on a unified basis. In that event the government securities market will shrink in relation to both the private capital market and U.S. GNP (see Chart 10) — the more so if foreign official reserve policies effectively lock up U.S. Treasury issues.*

The relative decline in the market for government obligations would be matched by growth in the private capital markets. The increased availability of funds for private investment would place downward pressure on real interest rates. How far rates might fall is a matter of controversy. The highest estimates offered in the literature on the "crowding out" of investment by government borrowing suggest that full implementation of the GRH budget targets would cut long-bond rates by more than 100 basis points, with another 100-point cut possible if the Social Security surplus develops as

projected. To take the place of the reduced stock of government securities, there also may be increased demand for relatively low-risk private-sector securities. The yield curve for such securities could steepen in consequence insofar as short-term assets are perceived as less risky. Rates on high quality private securities also could fall relative to lower quality issues.

Lower interest rates and higher domestic saving would have profound effects on the external balance. In particular, the United States could again become a net lender, pushing the current account toward surplus. The most noticeable change could be in U.S. trade with Japan. Demographically, Japan is about twenty years ahead of the United States. Whereas the ratio of the over-65 population to the workforce will remain roughly constant in the United States until 2010, it will more than double in Japan; the working-age population in Japan will be in outright decline, as already is the case in Germany. Therefore, during this period when the U.S. population would be well advised to step up capital formation, the Japanese may begin drawing on their accumulated capital. Reflecting the shift in relative savings behavior, net capital flows between the two nations, and the associated trade and current account imbalances, could reverse by the turn of the century, completing the adjustment already under way.

Do the demographic forces portend a higher or a lower real exchange market value of the dollar over the long term? Conflicting forces will be at work. If U.S. labor productivity growth matches that of other industrial countries, the relatively fast increase of the labor force points

*Speculation has arisen that, given the shrinkage of the deficit, the government soon will stop issuing new 30-year bonds. This speculation has little logic as a matter of sound debt management. As long as the market demand is there, and the government has to refinance the federal debt, issues spanning the whole range of maturities should continue to be sold for the foreseeable future.

to higher growth in economic activity in the United States than elsewhere. In itself, the correspondingly higher U.S. import demand at any given level of the exchange rate would suggest difficulties in achieving balance, let alone surplus, in the external accounts.

Yet a strong dollar often is inspired by a strong U.S. economy, particularly if productivity- and competitiveness-boosting investment can become the engine of U.S. growth as a result of budget surplus. By contrast, during the next twenty years the faster-aging populations of Japan and Germany may become much more consumption-oriented.

This strong dollar environment, however, is a long way off. The dollar's recent run-up, seemingly in response to U.S. monetary tightening and somewhat better trade results, still should be viewed as temporary. The dollar will hold firm on a permanent basis only when much more progress on the twin deficits has been achieved. Yet, for the time being the dollar's present level substantially eliminates the rela-

tive cost handicap borne by U.S. industry during the first half of the 1980s. Industry now has the opportunity to compete on price to recapture domestic and global market share. With its resources almost fully stretched, the open and growing U.S. economy is unlikely to see an absolute rollback in imports. Instead, decisive narrowing of the trade and current account deficits will depend on boosting exports 15%-20% annually for several years ahead.

To that end there is pressing need to expand the nation's productive capacity. This is a matter of raising and sustaining the U.S. net savings rate well above its average of the past twenty years. Higher saving is the fundamental rationale for steadfast implementation of the Gramm-Rudman-Hollings budget targets and for the productive investment of the Social Security surplus. By these means, domestic saving and investment should rise strongly enough to put the economy in good shape to carry the demographic burden of the next century.

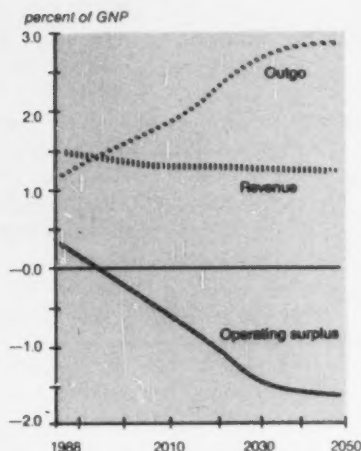
Controlling Social Security and Medicare

Barring unforeseen misfortune, the accumulation and investment of the Social Security surplus should keep the system on its feet for the next 75 years. Nonetheless, there are considerable downside risks to this promising outlook, risks that warrant further streamlining of the Social Security retirement system. In addition, projections show Medicare going into the red in 1998, exhausting its trust fund by 2005, and incurring a deficit of 3% of

taxable payroll by 2030. Reforms to Medicare therefore are needed if it is to meet its current obligations, let alone incorporate the host of new programs being debated in Congress. So long as current retirees and the elderly poor are protected, Social Security and Medicare should not be immune to cutback.

The Social Security system is intended to provide adequate protection for the elderly and disabled. With the growth of both

Chart 11

The Medicare outlook*

*Projections by Hospital insurance trustees based on current law and intermediate assumptions (variant IIB).

public and private pension plans, however, the elderly no longer are poor relative to the population as a whole.* Furthermore, in the future, as current public and private plans take full effect, the position of the elderly is likely to continue to improve. Admittedly, the elderly are particularly vulnerable to economic and health problems, so that holes in the Social Security and Medicare safety net need repair. It does not follow, however, that the elderly as a group deserve a larger slice of the economic pie than their numbers warrant.

Two reforms of future retirement benefits would significantly alleviate the potential burden on contributors and, by lowering expected benefits, would encourage higher private saving. The first reform would reduce future benefits to middle- and upper-income recipients. The formula for calculating benefits could be made more progressive. Alternatively, with appropriate protection for the low-income elderly, benefits could be fully taxed as ordinary income, raising revenue by about 1% of taxable payroll per year.

The second reform would be to increase further the retirement age at which full benefits are paid. Under the current law that age is to rise gradually to 67 by the year 2027. Instead, the phase-in could be accelerated and the age pushed up to 68 or 69, for a saving in outlays of 1%-1.5% of taxable payroll per year. Later retirement would

be consistent with demographic trends toward longer and healthier lives, such that many people likely will wish to work longer, although not necessarily in their primary working-life occupation. Besides, faced with the likely labor shortage of the next century, firms will be less keen to encourage the early retirement of seasoned employees. This would reverse the tendency of the last two decades when slower economic growth and a rapid increase in the labor force have made early retirement attractive.

Medicare warrants urgent attention. Under current law, Medicare outlays are projected to rise an average 10% annually over the next 40 years, even using assumptions on health-cost inflation that are optimistic relative to recent experience. The Medicare trust funds are projected to run deficits reaching 1.5% of GNP by the end of the same period (see Chart 11) and will be prime suitors for "borrowing" from the Social Security surplus. Such borrowing would not be a permanent solution; taken together, the Medicare and Social Security trust funds could be exhausted by 2030.

Regaining Medicare solvency will require a combination of creativity, realism, and restraint to address both financing arrangements and the costs of care. Ideally, Congress and the Administration would address the long-run funding problems of the current system before succumbing to pressures for expanded benefits. Recent bills before Congress have sought coverage for long hospital stays, large doctors' bills, prescription drugs, and both nursing and private home care.

Most of the proposed bills have been advertised as "self-

Table 8

**Health care spending
1984, percent of GNP**

	Public	Total
United States	4.4	10.7
Canada	6.2	8.4
Japan	4.8	6.6
Germany	6.4	8.1
France	6.5	9.1
Italy	6.1	7.2
United Kingdom	5.3	6.9
Denmark	5.3	6.3
Sweden	8.6	9.4

Source: OECD.

*In 1967 30% of people over 65 had incomes below the poverty line, more than double the rate for the rest of the population. Today the opposite is true: average incomes and wealth of the elderly exceed those of the population as a whole. Furthermore, the poverty rate among the elderly is below 15%, a lower incidence than among the rest of the population.

financing," relying primarily on insurance premiums and taxes levied on the elderly. These are favored over payroll tax financing, since the group receiving the increased benefits pays the associated costs. Initially the costs would be fairly modest. For example, the Congressional Budget Office estimates the price tag on the catastrophic health costs bill at \$7-\$11 billion in 1992. By itself this would represent no more than a 12% increase in Medicare outlays over the next four years. More ominous would be the accelerating growth in the covered catastrophic costs — to above 10% per annum in 1992 and still faster thereafter. There is a limit to how high taxes on the elderly can go before pressure mounts to shift the burden onto the general population. Were the costs of the more generous new health care proposals to be assumed by the payroll tax, the Medicare portion, now 2.9%, could triple by the time the baby boomers retire.

Before this happens, it would make sense to reconsider the potential role of private sources of funds. With about \$2 trillion in assets, the elderly as a group can afford to continue paying substantial medical bills, given well-conceived private financing options. For example, at individual premiums of some \$350 annually, the more comprehensive "Medigap" insurance policies, which fill gaps in Medicare coverage, protect against catastrophic costs much better than any of the proposals considered by Congress. For nursing home care, by contrast, the private in-

surance market leaves much to be desired. Nor have the private markets yet evolved widely available and appropriate mechanisms to mobilize the near-50% of the elderly's assets that are tied up in home equity. One attempt is seen in the "reverse annuity" mortgage instruments that some banks now offer, whereby the bank pays the retiree homeowner a lifetime income in exchange for a full or partial equity claim following the homeowner's death. Unfortunately, wider use of such instruments is inhibited by their unfamiliarity, illiquidity, and, in some states, unacceptability to regulators.

Value for money should be the other priority concern in health care. In 1984 the U.S. health industry consumed 10.7% of GNP, a higher percentage than anywhere else in the industrial world (see Table 8). U.S. spending was significantly above that of the next highest spender, Sweden, and double that of the United Kingdom. At present, the preponderance of passive, third-party financing in the U.S. health care system militates against cost-consciousness. This failing can never be adequately addressed by ever-increasing regulation. Getting more care for less money is a matter of creating effective incentives to both patients and providers to choose and develop cost-sparing solutions. Strengthening the role of provider competition is crucial for a more satisfactory outcome. So too is acceptance of the hard reality that, one way or another, health care cannot be exempt from demand restraint.

Statistical appendix

For key to data in tables see pages 22 and 23.

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Effective exchange rates — industrial countries

Index numbers, 1980-82 average=100.

	United States	Canada	Japan	Australia	France	Germany	Italy	United Kingdom	Austria	Belgium	Netherlands	Spain	Switzerland	Denmark	Norway	Sweden
Nominal against 15 other industrial-country currencies																
1983	114.2	100.8	107.8	92.0	87.3	107.5	90.3	91.6	103.6	90.0	105.0	78.4	111.5	96.4	99.5	82.2
1984	122.3	97.3	112.9	94.2	84.4	107.3	86.7	88.1	103.6	88.9	103.9	77.4	110.5	93.9	97.8	84.3
1985	127.0	92.8	115.9	76.3	85.5	107.8	82.1	88.2	104.2	89.6	104.0	75.6	109.5	95.1	95.8	83.9
1986	106.0	87.6	150.1	61.4	87.4	116.1	82.9	80.7	107.8	92.9	110.3	73.4	118.1	99.7	89.2	81.6
1987	94.1	89.0	164.4	58.3	87.1	122.0	82.3	79.0	110.8	95.6	114.6	73.1	123.1	102.8	85.7	80.1
1987																
June	94.8	88.8	164.7	59.9	87.1	121.6	81.8	79.1	110.2	95.6	114.3	71.9	122.7	103.4	86.5	80.5
July	96.0	90.0	159.1	60.0	87.2	121.4	81.6	79.2	110.2	95.4	114.2	72.5	122.2	102.4	87.2	80.4
August	95.7	90.0	162.7	59.6	86.8	121.3	81.5	78.9	110.1	95.2	114.1	73.6	122.6	101.3	87.3	80.2
September	93.9	90.3	165.4	60.5	86.9	121.5	81.8	79.6	110.1	95.3	114.4	74.6	122.7	101.0	87.4	79.7
October	93.4	90.7	165.1	58.9	86.7	121.3	81.7	80.0	115.7	95.1	114.5	75.9	122.3	101.3	87.0	79.6
November	90.0	89.3	171.2	54.3	86.7	123.6	81.2	81.5	110.9	95.6	115.9	75.6	125.4	102.5	85.2	79.2
December	87.4	89.4	178.6	55.1	87.0	123.8	81.4	81.9	110.8	95.8	115.9	75.2	126.9	103.0	83.5	78.9
1988																
January	87.4	91.0	179.8	55.1	87.2	123.4	81.3	81.2	110.7	95.6	115.8	74.8	126.5	103.0	84.6	79.1
February	88.2	92.6	179.3	56.0	86.8	122.9	81.0	80.8	110.7	95.4	115.6	75.0	125.1	102.8	85.4	79.7
March	86.8	93.7	180.7	57.0	86.3	122.8	80.5	83.5	110.7	95.2	115.4	75.5	123.9	102.3	85.1	79.9
April	85.8	94.6	183.2	57.5	85.9	122.6	80.1	85.2	110.6	94.9	115.3	76.2	123.6	101.5	86.1	80.1
May	86.1	94.5	183.7	60.0	86.1	122.1	79.7	85.4	110.4	94.8	115.0	76.0	122.2	101.2	87.1	80.4
May 6	85.9	94.7	183.4	59.0	86.0	122.6	79.8	84.9	110.6	95.0	115.2	76.2	122.6	100.9	87.0	80.4
13	85.8	94.6	183.7	59.3	86.1	122.3	79.8	85.7	110.4	94.8	115.0	75.9	122.6	101.0	87.1	80.3
20	86.3	94.5	183.4	59.9	86.0	121.9	79.7	85.7	110.3	94.8	114.9	75.9	122.0	101.2	87.2	80.4
27	86.3	94.3	184.3	61.3	86.2	121.7	79.6	85.5	110.2	94.8	114.8	75.9	121.6	101.4	87.3	80.4
June 3	86.9	95.1	183.4	62.9	86.2	121.8	79.5	84.1	110.2	94.7	114.7	75.8	121.8	101.6	87.2	80.3
10	86.6	95.7	183.5	62.6	86.2	122.0	79.6	83.6	110.3	94.8	114.8	76.0	121.9	101.9	87.2	80.2
17	87.0	96.5	183.8	63.2	86.1	121.6	79.5	83.6	110.1	94.5	114.5	75.7	121.4	101.7	87.1	80.2

Real against 15 other industrial-country currencies

1983	112.7	102.6	95.8	101.8	94.7	101.0	101.1	93.1	102.0	88.6	100.8	88.8	105.1	100.4	102.0	90.8
1984	119.6	101.2	97.8	106.4	97.0	98.0	101.8	90.2	103.0	85.9	97.8	91.0	100.1	99.2	100.5	96.0
1985	121.7	96.3	99.0	85.9	100.4	96.6	100.2	92.8	103.2	85.2	96.5	92.3	97.9	101.2	99.3	96.8
1986	100.8	93.3	122.1	78.3	103.6	104.1	102.3	87.2	106.1	84.4	101.1	93.7	105.2	107.2	96.8	95.8
1987	90.1	96.4	127.8	80.3	105.0	107.2	103.3	87.3	109.8	84.1	104.1	95.6	109.1	111.4	100.2	95.1
1987																
December	84.2	97.0	136.7	77.8	104.3	108.5	103.7	90.9	109.5	83.0	104.3	100.2	112.0	112.2	98.8	94.8
1988																
January	84.5	99.1	137.0	78.0	104.3	108.1	104.1	90.7	109.3	82.8	102.0	100.3	111.1	112.0	100.5	95.5
February	85.3	100.2	136.0	79.8	103.7	107.5	104.6	90.5	109.1	82.2	102.1	101.0	109.7	112.4	101.7	96.5
March	84.1	101.5	136.6	81.6	103.4	107.3	103.3	93.8	109.2	81.7	102.4	99.8	108.9	112.2	101.3	97.1
April	83.4	102.7	137.5	82.7	102.8	107.2	103.2	96.1	108.7	81.3	101.6	100.7	108.1	111.4	103.0	97.2
May	83.8	102.7	137.4	86.7	103.0	106.6	103.1	96.5	108.6	81.0	101.0	101.0	107.0	112.2	104.8	97.0

Real against 18 other industrial-country and 22 LDC currencies

1983	114.9	104.6	100.4	102.0	94.4	100.6	100.8	93.1	102.1	88.2	99.5	89.2	105.1	100.3	101.9	91.0
1984	120.8	102.6	102.4	106.7	96.4	96.8	101.0	89.7	102.6	85.0	95.9	91.2	99.8	99.0	100.5	95.8
1985	123.3	99.0	104.2	89.6	99.9	95.6	99.7	92.2	102.8	84.5	94.7	93.0	97.7	101.1	99.7	96.7
1986	106.3	94.3	126.7	80.2	104.1	105.2	103.7	87.9	106.9	84.9	101.0	96.2	107.1	107.7	97.6	96.5
1987	96.2	96.5	131.5	81.8	106.1	109.5	105.8	88.8	111.3	85.3	105.0	99.1	112.1	112.2	101.1	96.4
1987																
December	90.2	96.3	139.5	79.4	105.5	111.0	106.5	92.7	111.3	84.4	105.4	104.1	115.1	113.0	99.8	95.9
1988																
January	90.4	98.4	139.8	79.5	105.3	110.4	106.7	92.4	110.9	84.0	103.0	104.0	114.1	112.8	101.5	96.7
February	90.6	99.5	138.7	81.1	104.5	109.4	106.9	92.0	110.6	83.2	102.9	104.4	112.4	113.1	102.7	97.8
March	89.5	100.7	139.2	83.0	104.1	109.2	105.6	95.3	110.6	82.7	103.1	103.0	111.4	113.0	102.3	98.2
April	88.7	101.8	140.0	84.2	103.5	108.8	105.3	97.5	110.0	82.2	102.2	103.9	110.5	112.2	104.0	98.3
May	89.1	101.3	139.9	87.9	103.5	108.1	105.1	97.8	109.7	81.8	101.4	104.0	109.1	112.9	105.7	98.1

Real effective exchange rates — developing countries

Index numbers, 1980-82 average=100.

	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Venezuela	Hong Kong	Indonesia	Korea	Malaysia	Philippines	Singapore	Taiwan	Israel	Turkey
1983	71.6	86.0	89.3	104.9	79.0	98.5	117.3	95.0	96.2	97.6	113.9	96.1	101.8	94.6	120.8	94.2
1984	80.2	85.7	90.1	99.8	91.9	105.8	85.9	99.5	96.0	96.5	119.7	107.9	102.5	97.1	119.5	89.6
1985	71.0	84.8	79.5	85.3	90.4	98.5	92.7	103.3	93.7	88.7	115.7	114.1	95.2	94.3	106.5	88.8
1986	60.8	74.2	68.4	67.4	65.0	96.3	85.4	93.2	70.6	82.0	94.0	89.7	79.8	88.3	100.7	70.5
1987	53.3	73.5	65.1	63.0	66.7	107.6	60.1	89.2	53.9	83.9	87.9	86.4	73.3	93.4	97.1	62.5
1987																
June	53.5	75.2	65.4	62.7	64.9	109.2	61.7	90.4	53.9	84.6	88.7	86.0	73.3	94.6	96.7	62.8
July	53.3	72.9	65.6	63.9	66.2	115.0	63.6	89.8	55.2	86.4	88.6	86.4	73.9	95.8	98.5	62.9
August	54.6	71.1	66.1	63.5	69.8	119.9	64.3	89.4	55.1	86.0	88.4	88.2	74.2	97.4	99.6	63.1
September	53.5	71.0	65.3	62.7	71.5	121.1	64.5	90.2	54.0	85.0	88.3	87.0	73.5	97.4	99.7	61.6
October	53.8	73.3	64.2	62.1	73.6	119.9	64.9	89.9	54.3	85.7	87.0	89.1	73.0	98.1	100.4	60.7
November	49.2	73.9	61.6	60.4	73.5	104.8	64.2	89.0	52.8	85.3	84.8	87.3	72.0	94.8	99.2	58.6
December	49.0	74.7	61.3	60.0	67.2	80.1	63.3	87.1	51.1	84.3	82.7	87.8	70.1	95.9	98.9	62.3
1988																
January	49.3	76.9	59.1	61.6	72.6	76.5	62.9	85.7	51.0	85.3	81.4	87.5	70.0	95.5	100.1	62.8
February	50.9	78.0	60.7	62.7	79.1	88.0	63.8	85.9	51.7	88.1	81.1	87.6	70.8	96.3	101.3	63.5
March	51.6	76.7	62.4	61.4	80.1	104.1	63.6	86.6	50.9	89.0	80.4	85.4	68.9	95.0	101.8	64.2
April	52.2	78.1	63.0	60.1	79.7	121.4	63.3	86.6	50.6	89.2	79.9	85.3	69.0	94.6	102.4	65.0
May	55.1	78.0	59.5	59.7	80.4	131.8	63.7	88.5	51.1	90.3	79.8	87.3	69.4	93.1	103.8	64.7

International banking market size

at end of period, billions of dollars

	1982	1983	1984	1985	1986	1987			
					Dec	Mar	Jun	Sep	Dec
Gross claims									
Eurocurrencies, on residents and nonresidents	2 146	2 253	2 359	2 833	3 560	3 811	3 942	4 147	4 405
On nonbanks	634	665	694	822	938	995	1 175	1 215	1 284
On banks	1 512	1 588	1 665	2 011	2 622	2 817	2 767	2 932	3 121
In dollars	1 694	1 797	1 894	2 101	2 534	2 602	2 753	2 882	2 891
In other currencies	452	456	465	732	1 025	1 209	1 189	1 265	1 515
Domestic currencies, on nonresidents	398	402	402	506	672	721	757	801	915
On nonbanks	132	140	142	187	209	229	236	230	222
On banks	266	262	260	319	463	492	521	571	693
In dollars	211	221	215	215	227	206	215	220	221
In other currencies	187	181	187	291	445	515	542	581	694
Total	2 544	2 655	2 761	3 339	4 232	4 532	4 699	4 948	5 320
On nonbanks	766	805	836	1 009	1 147	1 224	1 411	1 445	1 506
On banks	1 778	1 850	1 925	2 330	3 085	3 309	3 288	3 503	3 814
In dollars	1 905	2 018	2 109	2 316	2 761	2 808	2 968	3 102	3 112
In other currencies	639	637	652	1 023	1 470	1 724	1 731	1 846	2 209
Gross liabilities									
Eurocurrencies, to residents and nonresidents	2 168	2 278	2 386	2 846	3 579	3 851	3 999	4 205	4 481
To nonbanks	432	479	497	585	685	740	768	791	808
To official monetary institutions	91	88	96	112	109	125	139	151	151
To other banks	1 645	1 711	1 793	2 149	2 786	2 986	3 085	3 263	3 502
In dollars	1 741	1 846	1 950	2 147	2 553	2 648	2 785	2 936	2 924
In other currencies	427	432	436	699	1 026	1 203	1 214	1 269	1 537
Domestic currencies, to nonresidents	250	260	280	377	494	556	580	638	782
To nonbanks	70	73	80	114	116	134	144	176	191
To banks	180	187	200	263	377	422	436	462	591
In dollars	116	135	146	169	192	192	197	212	262
In other currencies	134	125	134	208	302	364	383	427	520
Total	2 418	2 538	2 666	3 223	4 073	4 407	4 579	4 843	5 243
To nonbanks	502	552	577	699	801	874	912	967	999
To banks and official institutions	1 916	1 986	2 089	2 524	3 272	3 533	3 660	3 876	4 244
In dollars	1 857	1 981	2 096	2 316	2 745	2 840	2 982	3 148	3 186
In other currencies	561	557	570	907	1 328	1 567	1 597	1 696	2 057
Net market size	1 285	1 382	1 430	1 676	1 979	2 083	2 170	2 231	2 377

International bond issues and bank credits

millions of dollars

	1985	1986	1987	1988			Jan-May	
				Mar	Apr	May	1987	1988
By country of borrower								
Industrial countries	225 885	273 653	248 758	30 424	27 440	24 754	105 035	141 921
Australia	14 407	19 251	11 349	1 824	1 535	1 552	4 845	6 167
Austria	2 435	3 821	4 695	569	991	180	1 974	4 089
Belgium	3 269	5 042	4 443	525	81	161	2 054	1 708
Canada	17 184	23 752	10 181	2 198	1 570	1 229	4 373	7 425
Denmark	3 589	9 813	4 774	359	691	325	3 502	2 297
Finland	1 846	3 578	3 517	779	190	880	1 967	2 581
France	18 773	20 027	16 022	2 981	2 284	2 059	7 243	13 188
Germany	3 452	12 589	10 922	1 338	729	290	5 938	4 080
Greece	1 567	1 361	1 482	350	—	119	510	469
Ireland	1 861	3 261	2 195	331	150	123	939	835
Italy	11 033	12 723	13 421	1 499	707	513	3 337	3 892
Japan	21 269	35 283	45 591	2 016	4 070	2 570	17 606	16 488
Netherlands	2 299	3 215	5 069	610	383	645	2 158	2 744
New Zealand	2 707	7 818	5 942	437	402	1 936	2 698	3 086
Norway	3 905	6 750	5 917	478	888	544	3 355	3 789
Portugal	2 382	2 503	2 159	—	362	—	1 010	1 051
Spain	3 913	7 083	1 794	434	250	82	757	1 275
Sweden	9 890	6 000	5 766	1 683	1 889	985	2 914	6 528
Switzerland	864	2 247	1 201	—	864	250	635	915
United Kingdom	25 424	24 109	33 225	5 446	4 638	5 582	15 867	26 056
United States	69 193	55 703	45 412	6 129	2 867	3 978	19 971	24 513
Other*	4 582	5 703	13 719	440	2 099	750	1 385	8 764
Developing countries	32 964	23 884	28 070	5 372	925	1 635	15 062	10 922
Latin American countries	8 115	3 395	10 729	2 635	94	130	8 097	3 988
Argentina	3 700	17	2 110	—	—	—	—	—
Brazil	—	350	—	—	—	—	—	—
Chile	1 085	—	—	—	—	—	50	1 000
Colombia	1 052	240	137	—	—	—	7 700	2 556
Mexico	109	313	7 700	2 556	—	—	—	134
Venezuela	48	—	30	—	34	—	—	298
Other**	2 121	2 475	753	79	60	130	347	—
Asian countries	18 410	14 444	13 219	1 935	565	486	5 422	4 440
China	3 192	3 336	4 338	515	300	192	1 676	1 252
India	816	1 795	2 156	546	82	120	905	1 133
Indonesia	451	1 343	1 745	174	—	30	620	330
Hong Kong	2 516	848	649	79	—	81	286	159
Korea	5 898	3 251	2 522	345	98	—	1 322	602
Malaysia	2 219	1 204	554	276	60	—	167	568
Thailand	1 497	1 676	463	—	—	—	169	300
Other	1 819	990	792	—	25	63	276	95
Middle Eastern and African countries	6 439	6 044	4 122	802	266	1 019	1 543	2 493
Algeria	1 450	1 344	344	153	—	—	154	333
Turkey	1 203	2 754	2 831	434	266	790	969	1 705
Other	3 786	1 945	947	215	—	228	420	455
Eastern European countries	5 236	3 941	3 564	317	150	150	1 657	690
Hungary	1 577	1 315	1 951	317	—	—	714	317
Soviet Union	1 480	1 821	804	—	50	150	862	273
Other***	2 169	805	749	—	100	—	280	100
International organizations****	20 635	19 896	20 013	3 034	1 824	1 072	8 051	6 866
By type of instrument and currency								
International bond issues	167 756	228 106	177 291	21 552	19 548	19 055	85 646	95 311
Eurobonds	136 731	188 747	140 481	15 620	16 249	15 476	73 214	74 725
U.S. dollar	97 782	119 096	56 727	5 551	4 805	4 858	26 131	27 529
Japanese yen	6 539	18 516	23 119	694	3 098	1 961	14 562	8 058
German mark	9 491	17 127	15 516	3 256	1 413	1 873	8 645	10 693
British pound	5 766	10 585	14 997	2 713	3 184	3 215	8 006	12 622
Australian dollar	3 118	3 381	9 041	486	1 111	989	5 211	3 590
European composite units	7 038	7 057	7 423	1 163	765	927	4 569	3 621
Canadian dollar	2 822	5 067	5 891	1 224	1 196	1 306	2 820	5 751
Other	4 174	7 918	7 766	531	679	347	3 271	2 862
Foreign bonds	31 025	39 359	36 811	5 932	3 299	3 579	13 432	20 587
Swiss franc	14 954	23 213	23 976	3 048	2 148	2 118	8 789	13 329
U.S. dollar	4 655	6 782	5 911	979	356	550	1 750	2 585
Japanese yen	6 379	5 223	3 068	1 286	484	481	1 517	2 482
Other	5 037	4 141	3 856	620	311	429	1 375	2 190
International bank credits	116 964	93 269	123 115	17 595	10 591	8 557	43 160	67 089
Eurocurrency credits	110 317	84 208	112 104	16 700	10 158	8 193	39 919	65 132
Foreign credits	6 647	9 061	11 012	895	435	364	3 241	1 957
Total	284 720	321 375	300 406	39 148	30 140	27 911	129 806	162 400

*Includes multinational organizations.

**Includes unallocated.

***Includes COMECON institutions.

****Includes regional development organizations.

Eurocurrency deposit rates

prime banks' bid rates, at or near end of month

	1984	1985	1986	1987		1988				
	Dec	Dec	Dec	Nov	Dec	Jan	Feb	Mar	Apr	May
Eurodollar										
overnight	8.63	12.25	22.00	6.62	6.75	6.69	6.69	6.75	6.88	7.31
one month	8.38	8.00	6.50	8.25	7.06	6.69	6.69	6.69	7.00	7.44
three months	8.63	7.88	6.25	7.94	7.37	6.81	6.69	6.81	7.19	7.63
six months	9.13	7.88	6.12	7.94	7.50	6.87	6.75	7.06	7.44	7.81
twelve months	9.81	7.94	6.12	8.19	7.81	7.25	7.12	7.44	7.88	8.31
Euro-Canadian dollar										
one month	9.88	9.00	8.00	8.56	8.00	8.50	8.25	8.25	8.44	8.81
three months	10.81	9.00	8.12	9.00	8.12	8.37	8.37	8.37	8.75	8.94
six months	10.06	9.00	5.19	9.12	8.44	8.50	6.37	6.62	8.88	9.19
twelve months	10.44	9.00	8.31	9.44	8.87	8.75	8.75	9.00	9.25	9.63
Euro-French franc										
one month	10.69	12.50	10.12	9.37	8.75	7.50	7.25	7.81	8.00	7.31
three months	10.69	13.00	10.37	9.37	9.00	8.00	7.75	8.31	8.25	7.50
six months	11.00	13.13	9.75	9.37	9.25	8.25	8.19	8.44	8.38	7.63
twelve months	11.38	12.25	8.75	9.37	9.25	8.50	8.50	8.56	8.50	8.00
Euromark										
one month	5.50	4.75	5.12	3.94	3.25	3.19	3.31	3.25	3.31	3.31
three months	5.50	4.75	4.87	3.94	3.37	3.25	3.31	3.31	3.44	3.56
six months	5.56	4.75	4.81	4.06	3.50	3.31	3.37	3.37	3.63	3.81
twelve months	5.56	4.81	4.81	4.12	3.75	3.56	3.50	3.56	3.81	4.19
Euro-Dutch guilder										
one month	5.69	5.75	6.31	4.81	4.50	3.94	3.94	3.87	3.88	3.81
three months	5.75	5.75	6.00	4.94	4.62	4.00	4.00	3.87	3.94	3.94
six months	5.81	5.81	5.87	5.00	4.69	4.12	4.06	4.06	4.06	4.13
twelve months	5.94	5.88	5.81	5.12	4.81	4.37	4.12	4.19	4.19	4.44
Euro-Swiss franc										
one month	4.44	3.88	3.94	4.94	2.50	1.25	1.37	1.62	2.06	2.81
three months	4.56	4.00	3.94	4.06	3.00	1.81	1.69	1.87	2.25	2.88
six months	4.63	4.00	3.87	4.06	3.19	2.37	2.12	2.19	2.44	2.94
twelve months	4.69	4.06	3.87	4.06	3.25	2.87	2.69	2.62	2.75	3.13
Eurosterling										
one month	9.50	11.69	11.12	9.00	8.56	8.44	9.00	8.44	8.06	7.38
three months	9.88	11.81	11.12	8.94	8.81	8.69	9.31	8.56	8.31	7.75
six months	10.00	11.81	11.06	9.00	9.00	8.87	9.50	8.69	8.69	8.25
twelve months	10.19	11.69	11.06	9.12	9.31	9.25	9.75	9.00	9.06	8.81
Euroyen										
one month	6.19	7.13	4.56	4.75	4.00	4.06	4.37	4.00	3.81	4.06
three months	6.19	6.56	4.50	4.44	4.12	4.12	4.19	4.00	3.94	4.06
six months	6.13	6.50	4.37	4.37	4.12	4.12	4.19	4.12	4.13	4.25
twelve months	6.13	6.38	4.31	4.44	4.12	4.19	4.19	4.19	4.25	4.31
European currency unit										
one month	9.25	9.63	8.56	6.94	6.62	5.87	6.12	6.19	6.13	5.63
three months	9.38	9.63	8.44	7.00	6.75	6.19	6.31	6.37	6.38	6.00
six months	9.50	9.63	8.06	6.94	6.87	6.37	6.44	6.44	6.50	6.31
twelve months	9.63	9.63	7.31	7.06	7.00	6.62	6.62	6.62	6.69	6.56

International bond yields

average yield of several actively traded, high quality issues with a maturity of 7 to 12 years
at or near end of month

	1985	1986	1987					1988		
	Dec	Dec	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
United States companies										
<i>Eurodollar</i>	9.68	8.67	9.99	10.95	10.41	10.21	10.31	10.24	9.79	9.78
<i>Euromark</i>	6.73	6.62	6.82	6.87	7.04	6.74	6.69	6.54	6.27	6.33
<i>Swiss franc</i>	5.49	5.70	5.43	5.50	5.83	5.56	5.71	5.57	5.66	5.61
European governments										
<i>Eurodollar</i>	10.52	9.91	11.41	11.81	11.83	11.83	11.64	11.48	11.38	11.50
<i>Euromark</i>	7.03	6.77	6.65	6.76	6.81	6.81	6.21	6.23	6.07	6.06
<i>Swiss franc</i>	4.91	4.51	4.38	4.39	4.54	4.15	4.11	4.05	3.71	3.88
<i>European currency unit</i>	10.23	10.20	10.43	10.46	11.10	11.06	10.84	10.85	10.56	10.35

Central bank discount rates

at or near end of month

	1985	1986	1987	1988						Current	
	Dec	Dec	Dec	Jan	Feb	Mar	Apr	May		Jun 20 1988	effective since
United States	7.50	5.50	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	Sep 24, 87
Canada	9.49	8.47	8.66	8.62	8.57	8.78	9.12	9.17	9.39	9.39	Jun 23, 88
Austria	4.00	4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	Dec 3, 87
Belgium	9.75	8.00	7.00	6.75	6.75	6.50	6.50	6.50	6.50	6.50	Mar 3, 88
Denmark	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	Oct 27, 83
Finland	9.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	May 19, 86
France	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	9.50	Aug 31, 77
Germany	4.00	3.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	Dec 3, 87
Ireland	10.25	13.25	9.25	9.25	9.25	9.25	8.50	8.00	8.00	8.00	May 30, 88
Italy	15.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	Aug 28, 87
Netherlands	5.00	4.50	3.75	3.75	3.25	3.25	3.25	3.25	3.25	3.25	Feb 5, 88
Portugal	19.00	16.00	14.50	14.50	14.00	14.00	14.00	14.00	14.00	14.00	Feb 5, 88
Spain	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	Jul 26, 77
Sweden	10.50	7.50	7.50	7.50	7.50	7.50	8.50	8.50	8.50	8.50	Apr 29, 88
Switzerland	4.00	4.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	Dec 4, 87
United Kingdom	11.31	10.81	8.37	8.37	8.87	8.37	7.88	7.38	8.88	8.88	Jun 24, 88
Japan	5.00	3.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	Feb 23, 87
New Zealand	19.80	24.60	18.55	18.05	18.20	17.80	19.70	17.15	16.90	16.90	Jun 29, 88
South Africa	13.50	10.00	9.80	9.80	9.80	10.80	10.80	11.80	11.80	11.80	May 5, 88
Argentina*	5.00	11.19	17.59	15.71	16.71	18.38	19.10	21.58	21.58	21.58	May, 88
Korea	5.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	Jul 10, 88
Philippines	11.50	9.64	9.25	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Singapore	5.00	5.00	5.00	5.00	3.50	3.50	3.50	3.50	3.50	3.50	Feb, 88
Thailand	11.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	Sep 1, 88
Venezuela	12.94	12.79	12.49	12.89	12.93	n.a.	n.a.	n.a.	12.93	12.93	Feb, 88

*Percent per month.

Day-to-day money rates

monthly averages

	1984	1985	1986	1987							
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	8.38	8.27	8.91	7.29	6.89	6.77	6.83	6.58	6.56	6.87	7.09
Canada	10.50	9.23	8.28	8.41	8.16	8.40	8.44	8.41	8.45	8.28	8.69
Austria	7.63	7.25	7.62	4.60	4.20	4.10	4.50	3.50	3.50	3.65	3.60
Belgium	9.12	6.60	5.08	4.34	5.44	5.09	5.02	4.16	5.10	5.05	4.28
Finland	15.07	11.98	11.97	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
France	10.95	9.02	7.80	7.89	8.87	8.23	7.80	7.28	7.54	7.55	7.34
Germany	5.82	4.64	5.00	3.74	3.55	3.19	3.13	3.32	3.24	3.25	3.30
Ireland	14.50	9.82	13.00	6.50	8.50	7.50	8.00	8.50	8.25	8.00	7.38
Italy	17.25	14.75	11.42	10.90	10.25	10.25	10.60	9.87	10.14	9.95	11.41
Netherlands	5.60	5.75	6.19	5.19	4.44	4.25	4.12	3.87	3.94	4.00	3.94
Norway	12.50	12.50	14.00	13.80	13.68	14.02	13.88	13.87	13.91	14.03	13.51
Spain	12.18	9.92	11.76	16.22	14.60	14.02	13.20	12.13	11.40	11.01	10.81
Sweden	11.88	11.83	8.89	8.42	8.97	8.43	8.75	9.37	9.61	9.71	9.75
Switzerland	1.50	2.00	1.12	1.25	1.50	0.50	0.50	1.00	1.25	2.13	2.25
United Kingdom	6.31	9.72	9.19	9.68	9.13	7.60	8.26	8.28	8.55	8.13	7.51
Australia	10.98	18.37	15.40	10.77	10.90	10.37	10.23	10.25	10.33	10.35	11.20
Japan	6.41	8.02	4.18	3.37	3.39	3.81	3.54	3.39	3.53	3.28	3.18
South Africa	21.13	12.50	8.50	8.64	8.45	9.76	9.75	9.25	9.85	10.00	10.90
Argentina*	17.75	4.50	7.00	9.00	9.80	14.90	16.40	14.90	17.60	18.18	19.70
Brazil	272.02	352.23	83.05	150.10	329.33	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Hong Kong	6.80	6.10	3.90	4.92	1.90	0.58	0.58	1.83	2.84	3.64	6.02
Korea	10.00	8.80	9.00	10.00	8.70	9.20	9.30	9.20	9.40	n.a.	n.a.
Philippines	15.22	15.03	9.92	12.94	14.35	22.53	n.a.	n.a.	n.a.	n.a.	n.a.
Singapore	6.01	4.53	3.51	3.55	3.40	2.57	2.73	2.93	3.01	3.08	3.56
Taiwan	8.07	4.50	4.00	3.67	3.57	4.58	5.11	5.52	5.37	5.23	n.a.

*Percent per month.

Treasury bill rates

bond equivalent yields, at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	8.12	7.28	5.83	5.41	5.79	5.84	5.80	5.78	5.87	6.15	6.67
Canada	9.64	9.24	8.24	7.84	8.31	8.41	8.37	8.32	8.53	8.87	8.92
Belgium	10.90	9.89	7.50	7.25	6.95	6.84	6.44	6.24	6.18	6.18	6.18
Ireland	15.10	11.15	13.60	8.80	9.10	8.69	8.34	8.76	8.33	7.83	7.17
Italy	14.69	13.10	10.00	11.98	12.06	11.66	11.37	10.78	10.78	10.81	10.82
Netherlands	5.88	5.69	6.37	5.50	5.25	4.95	4.75	4.25	4.12	4.38	4.25
Spain	12.27	9.52	8.37	8.23	6.78	6.67	5.58	5.83	10.17	n.a.	10.25
Sweden	11.83	12.49	9.20	9.49	9.20	9.05	9.20	9.32	9.58	10.70	10.29
United Kingdom	9.33	11.49	10.79	9.07	8.67	8.38	8.38	9.01	8.26	7.98	7.28
Australia	12.27	19.40	14.91	10.47	10.34	10.08	9.92	10.44	9.83	10.40	11.60
Japan	4.91	4.91	2.69	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38
New Zealand	13.50	17.62	19.69	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
South Africa	21.94	12.99	8.84	8.68	8.64	8.85	9.49	9.55	10.51	10.97	11.61
Brazil	273.03	379.77	149.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mexico	48.67	72.98	104.03	96.43	110.67	133.04	155.67	153.86	75.16	54.51	50.04
Philippines	47.14	16.45	9.55	12.97	13.18	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Singapore	2.91	2.94	2.10	3.57	3.69	3.23	2.92	2.97	2.97	3.02	n.a.

Representative money market rates

bond-equivalent yields on major short-term (mostly 3-4 month) money market instruments other than Treasury bills, at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	8.49	8.02	6.64	7.58	7.80	7.21	6.90	6.77	6.90	7.20	7.75
Canada	10.00	9.40	8.35	8.50	8.70	8.90	8.65	8.55	8.65	8.94	9.32
Belgium	10.85	9.89	7.60	7.35	7.15	6.95	6.54	6.34	6.24	6.24	6.24
France	10.69	9.12	6.37	6.25	6.62	6.56	6.06	7.44	8.25	7.88	n.a.
Germany	5.75	4.80	4.85	4.10	3.80	3.65	3.23	3.28	3.40	3.55	3.60
Ireland	15.13	12.00	14.06	9.25	9.19	8.81	8.62	8.94	8.38	8.13	7.38
Italy	16.88	15.13	11.37	12.00	11.62	11.50	10.75	11.13	11.13	10.38	11.00
Netherlands	5.75	5.75	6.19	5.25	4.94	4.56	4.32	4.06	4.06	4.13	4.19
Portugal	24.57	20.71	16.07	14.66	14.30	14.34	13.97	13.43	13.03	n.a.	n.a.
Spain	12.21	10.51	11.79	15.84	14.44	13.59	12.30	12.01	11.06	10.90	11.11
Switzerland	5.00	4.75	4.50	4.06	4.06	3.56	1.69	1.81	1.88	2.13	2.75
United Kingdom	9.88	12.75	11.25	9.19	8.87	8.94	8.31	9.38	8.56	8.31	7.81
Australia	12.90	19.75	15.10	13.55	12.15	11.25	10.85	10.90	11.50	11.55	12.87
Japan	6.33	7.03	4.34	3.88	3.90	3.90	3.85	3.80	3.80	3.75	3.80
New Zealand	15.00	20.00	24.25	20.30	16.90	17.70	17.00	17.35	n.a.	17.20	15.75
South Africa	22.78	13.35	8.55	8.90	8.50	8.90	9.60	10.25	10.90	11.85	12.65
Chile	20.68	22.42	19.56	31.37	34.49	15.25	11.35	10.89	21.41	20.84	11.09
Hong Kong	8.25	6.50	4.62	6.19	4.06	1.50	3.00	3.87	4.12	5.13	7.31
Indonesia	19.00	15.00	19.50	17.37	17.50	17.50	17.00	18.50	22.50	18.50	19.00
Korea	8.00	8.00	8.00	7.50	7.50	7.50	n.a.	n.a.	n.a.	n.a.	n.a.
Malaysia	10.30	8.20	6.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.70	3.85
Philippines	33.21	14.61	8.31	11.81	n.a.	10.55	13.80	n.a.	n.a.	n.a.	n.a.
Singapore	7.00	5.88	3.94	4.50	4.00	3.25	3.13	3.13	3.19	n.a.	n.a.
Taiwan	7.85	4.10	3.87	3.23	3.13	3.09	4.12	4.47	4.23	4.48	n.a.

Commercial bank deposit rates

at or near end of month

	1984	1985	1986	1987		1988					
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	8.34	7.72	6.26	7.40	7.72	7.10	6.67	6.57	6.69	7.05	7.54
Canada	10.05	9.40	8.15	8.45	8.57	8.40	8.50	8.45	8.80	9.00	9.30
Austria	7.50	6.50	5.50	4.75	4.45	4.25	4.40	4.05	3.90	3.90	3.95
Belgium	10.63	9.63	7.44	6.80	6.66	6.69	6.31	6.25	6.19	6.00	6.06
Denmark	6.00	7.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Finland	5.25	4.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
France	7.04	6.12	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
Germany	5.25	4.40	4.80	3.90	3.70	3.50	3.20	3.20	3.25	3.40	3.40
Ireland	14.63	11.87	13.75	8.62	9.12	8.62	8.50	8.75	8.25	7.75	7.25
Italy	11.64	13.21	10.69	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	9.50	9.50
Netherlands	5.69	5.81	6.06	5.12	4.81	4.50	4.21	3.94	4.00	4.06	4.06
Norway	12.75	12.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Portugal	28.00	20.00	15.00	14.00	14.00	14.00	14.00	13.50	13.50	13.50	n.a.
Spain	11.64	9.64	8.67	9.11	9.32	9.48	9.39	9.30	9.17	9.05	n.a.
Sweden	11.45	12.18	9.93	9.70	9.70	9.45	9.55	9.55	9.95	10.95	10.60
Switzerland	4.50	4.50	4.25	3.81	3.81	3.37	1.44	1.56	1.63	1.88	2.50
United Kingdom	9.88	11.75	11.19	9.12	8.81	8.81	8.75	9.25	8.37	8.13	7.83
Australia	12.75	18.80	15.56	11.25	12.28	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Japan	6.38	7.04	4.55	4.63	4.46	4.42	4.33	4.41	4.38	4.25	4.30
New Zealand	15.25	19.98	23.50	19.85	16.85	16.85	16.00	n.a.	14.60	15.50	15.50
South Africa	22.88	13.20	8.65	9.35	9.30	10.25	11.20	11.90	11.90	12.70	14.00
Argentina*	31.23	5.40	8.41	9.10	8.92	14.00	15.12	14.30	17.10	18.10	18.70
Brazil	27.00	18.00	220.00	14.00	15.00	17.50	n.a.	n.a.	n.a.	n.a.	n.a.
Chile	20.68	23.60	20.98	30.30	31.53	14.84	11.75	9.25	19.84	17.73	9.77
Hong Kong	8.25	6.50	4.62	6.19	4.06	1.50	3.00	3.87	4.12	5.13	7.31
Korea	6.00	6.00	6.00	6.00	6.00	6.00	n.a.	n.a.	n.a.	n.a.	n.a.
Malaysia	9.58	7.00	6.33	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mexico	47.45	72.90	94.30	94.20	103.74	120.35	118.99	118.80	75.97	53.01	49.38
Philippines	31.01	12.34	7.75	8.56	9.50	11.19	9.85	9.27	10.09	n.a.	n.a.
Singapore	6.13	5.26	4.00	4.31	3.69	3.13	3.06	n.a.	n.a.	n.a.	n.a.
Taiwan	6.50	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25	5.25
Venezuela	12.50	8.00	8.00	8.92	8.95	8.95	8.97	8.94	8.85	8.96	n.a.

*Percent per month.

Domestic government bond yields

long-term issues, at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	11.61	9.49	7.79	9.04	9.10	8.95	8.42	8.39	8.82	9.07	9.31
Canada	11.66	10.04	9.23	10.21	10.50	10.34	9.74	9.61	10.13	10.36	10.38
Austria	8.03	7.81	7.33	7.26	7.13	6.89	6.83	6.80	6.71	6.62	6.61
Belgium	11.56	9.60	7.70	8.32	7.98	8.04	7.58	7.38	7.65	7.62	7.89
Denmark	14.60	9.67	11.70	12.56	11.84	12.05	11.18	10.91	11.22	11.44	n.a.
Finland	10.73	10.58	7.80	7.77	7.94	7.67	7.40	7.40	7.41	7.41	n.a.
France	12.70	11.33	9.89	10.95	10.46	10.57	9.73	9.33	9.61	9.42	9.38
Germany	7.17	6.57	6.25	6.62	6.46	6.51	6.50	6.28	6.30	6.47	6.68
Ireland	14.90	11.84	12.97	11.05	10.23	10.45	10.61	10.41	10.12	9.74	9.80
Italy	14.52	13.66	10.05	11.41	11.25	10.50	10.29	10.30	10.29	10.39	10.49
Netherlands	7.72	6.98	6.40	7.05	6.37	6.32	6.17	5.99	6.01	6.21	6.36
Norway	12.00	13.00	13.24	13.10	13.26	13.29	13.35	13.16	13.24	13.24	n.a.
Portugal	22.23	16.64	14.49	15.30	15.60	14.80	14.70	14.50	n.a.	n.a.	n.a.
Spain	13.93	12.52	10.36	14.24	13.34	13.14	12.48	11.91	11.82	11.35	11.63
Sweden	12.04	12.11	10.66	11.42	11.51	11.39	11.30	10.96	11.05	11.41	11.21
Switzerland	4.60	4.42	4.05	4.12	3.86	3.95	3.94	3.93	3.92	3.77	3.98
United Kingdom	10.25	10.35	10.17	9.22	9.23	9.47	9.26	9.10	8.96	9.14	9.17
Australia	13.50	14.85	13.40	13.65	13.30	12.85	12.40	12.30	11.90	11.50	12.30
Japan	6.47	5.92	4.61	4.58	5.00	4.88	4.23	4.36	4.43	4.45	4.60
New Zealand	16.90	17.00	16.00	15.70	14.90	14.30	14.00	13.30	13.08	13.15	13.05
South Africa	16.55	18.09	15.06	15.44	15.30	15.70	16.80	16.52	16.60	16.48	16.40
Philippines	18.54	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.
Venezuela	14.00	12.00	12.00	12.50	12.50	12.50	n.a.	n.a.	n.a.	n.a.	n.a.

Commercial bank lending rates to prime borrowers

at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	10.75	9.50	7.50	9.00	8.75	8.75	8.50	8.50	8.50	8.50	9.00
Canada	11.25	10.00	9.75	9.75	9.75	9.75	9.75	9.75	9.75	10.25	10.25
Austria	9.25	9.00	9.00	8.50	8.50	8.25	8.25	8.25	8.25	8.25	8.25
Belgium	14.00	11.50	9.75	8.75	8.75	8.75	8.75	8.50	8.50	8.50	8.50
Denmark	10.50	8.50	8.00	9.50	9.50	9.50	9.50	9.50	9.50	9.50	n.a.
Finland	10.68	10.37	8.81	8.97	9.02	8.99	9.03	9.05	9.07	n.a.	n.a.
France	12.00	10.60	9.45	9.45	9.45	9.45	9.45	9.45	9.45	9.45	9.45
Germany	7.75	7.25	6.75	6.25	6.25	6.25	6.00	6.00	6.00	6.00	6.00
Ireland	15.75	12.50	15.75	12.00	12.00	11.50	11.50	11.50	11.50	11.25	11.25
Italy	18.00	15.88	13.00	13.00	13.00	13.00	12.50	12.62	12.62	12.63	12.63
Netherlands	6.25	6.25	7.12	5.50	5.25	4.87	4.62	4.06	4.12	4.19	4.25
Norway	13.00	12.40	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Portugal	29.00	22.50	17.50	18.50	18.50	18.50	18.50	18.00	18.00	18.00	n.a.
Spain	15.84	14.75	14.22	16.48	16.38	16.34	16.10	15.76	15.42	15.23	14.79
Sweden	14.50	15.05	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	12.00
Switzerland	6.00	6.00	5.75	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
United Kingdom	9.50	11.50	11.00	9.50	9.00	8.50	8.50	9.00	8.50	8.00	7.50
Australia	14.00	21.00	18.50	14.00	14.00	14.00	13.50	13.50	13.50	n.a.	n.a.
Japan	5.50	5.50	3.75	3.37	3.37	3.37	3.37	3.37	3.37	3.38	3.38
New Zealand	14.00	21.00	23.00	22.50	19.75	18.75	18.75	n.a.	n.a.	n.a.	n.a.
South Africa	24.00	16.50	12.00	12.50	12.50	12.50	13.00	13.00	14.00	14.00	15.00
Argentina*	32.05	7.30	11.30	9.80	9.98	14.80	15.80	15.00	17.80	17.92	19.50
Brazil**	31.00	19.00	250.00	18.00	18.00	19.50	n.a.	n.a.	n.a.	n.a.	n.a.
Chile	60.82	33.34	29.13	37.33	40.20	30.99	21.22	20.51	25.49	31.64	21.88
Hong Kong	11.00	7.00	6.50	6.50	6.00	5.50	5.25	6.00	6.00	6.50	7.50
Indonesia	23.50	18.75	19.75	21.00	20.50	20.50	20.50	20.50	20.50	21.00	22.00
Korea	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Malaysia	12.00	10.50	10.00	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mexico	47.54	65.66	95.33	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Philippines	44.00	15.00	10.50	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Singapore	9.40	7.20	6.10	6.10	6.10	6.10	5.98	5.93	5.85	5.85	5.85
Taiwan	10.00	9.50	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Venezuela	16.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	n.a.

*Percent per month.

**Spread above monetary correction until Feb 86; nominal rate of interest until Jan 87; spread above LBC rate thereafter.

Domestic corporate bond yields

long-term issues, at or near end of month

	1984	1985	1986	1987			1988				
	Dec	Dec	Dec	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
United States	12.25	10.15	8.88	10.25	10.30	9.90	9.38	9.45	9.85	10.25	10.38
Canada	12.42	10.74	10.18	11.22	11.32	10.95	10.37	9.96	n.a.	10.97	10.86
France	12.94	11.76	10.18	11.28	10.96	10.92	10.38	9.91	10.03	9.78	9.77
Germany	7.20	6.90	6.50	7.00	6.70	6.70	6.70	6.70	6.60	6.60	6.80
Netherlands	7.51	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.	n.t.
Spain	18.32	14.92	13.40	17.39	17.05	16.15	15.79	14.68	14.78	12.89	12.89
Sweden	12.33	13.25	11.99	12.78	12.56	12.31	12.20	11.83	11.94	12.20	12.15
Switzerland	5.09	4.93	4.72	4.87	4.85	4.60	4.50	4.39	4.39	4.29	4.36
United Kingdom	11.64	11.47	11.71	10.75	10.59	11.11	10.76	10.82	10.66	10.55	10.69
Japan	7.10	6.79	5.93	5.95	5.59	5.32	5.06	5.03	4.99	4.93	4.95
Korea	15.00	13.60	12.80	12.50	12.90	12.80	12.80	13.20	13.70	13.90	n.a.
Venezuela	18.00	17.00	17.00	18.00	18.00	18.00	n.a.	n.a.	n.a.	n.a.	n.a.

Key to data in tables

I. International markets

Data on the international banking market size are based on resident and nonresident Eurocurrency (i.e., foreign currency) assets and liabilities and on nonresident domestic currency assets and liabilities of banks in nearly all European countries, the Bahamas, Bahrain, Canada, Cayman Islands, Hong Kong, Japan, Netherlands Antilles, Panama, Singapore, and the United States. All assets and liabilities of international banking facilities (IBFs) of banks in the United States are treated as Eurocurrencies.

An international bond issue may be either a Eurobond issue or a foreign bond issue. A Eurobond issue is one placed principally in countries other than that of the currency in which the bond is denominated, usually through an international syndicate. A foreign bond issue is one issued by a nonresident borrower on the market of a single country and denominated in that country's currency. Data on new international bond issue volume include all publicly announced issues of straight bonds, convertibles, bonds with warrants, floating rate notes, and certificates of deposit with an original maturity of three years or more (one year or more beginning in 1985), whether publicly or privately placed.

An international bank credit may be either a Eurocurrency credit or a foreign credit. A Eurocurrency credit is one denominated in a currency that is foreign to the country of the bank office extending the credit. A foreign credit is one extended to a nonresident borrower and denominated in the domestic currency of the country in which the bank office extending the credit is located. Data on new international bank credit volume include all publicly announced bank credits with an original maturity of one year or more (term loans, revolving lines of credit, and facilities to back up the issuance of other financial instruments such as commercial paper, short-term notes, certificates of deposit and banker's acceptances).

Data on international bond issues and bank credits through 1984 were compiled by Morgan Guaranty Trust Company. Beginning in January 1985 these data are based on figures published in the OECD's *Financial Statistics Monthly*.

II. Domestic markets

Central bank discount rates

Rates shown are the official discount rates with the exception of:

Ireland — Short Term Facility rate.

South Africa — discount rate for 90-day banker's acceptances.

United Kingdom — rate of discount for outright purchases of 15- to 33-day bank bills.

Day-to-day money rates

Argentina — 7-day interbank money regulated by the central bank.

Austria — day-to-day interbank rate.

Australia — effective interest rate in the official short-term money market.

Belgium — day-to-day loan rate in the call money market.

Brazil — interbank overnight money.

Canada — chartered banks' day-to-day loans.

Finland — Bank of Finland call money.

France — interbank call money against private paper.

Germany — interbank call money.

Hong Kong — interbank 24-hour call rate.

Ireland — interbank call money.

Italy — interbank 48-hour call money.

Japan — Tokyo interbank call money, unconditional lenders rate.

Korea — overnight interbank call money.

Netherlands — open-market call money.

Norway — day-to-day interbank rate.

Philippines — interbank call loan rate.

Singapore — interbank overnight money.

South Africa — discount houses basic call rate.

Spain — day-to-day interbank rate.

Sweden — interbank call money.

Switzerland — call money.

Taiwan — private interbank overnight loan rate.

United Kingdom — call money.

United States — federal funds rate.

Treasury bill rates

Australia — 13-week Treasury notes at tender.

Belgium — new issue of 3-month Treasury certificates.

Brazil — 3-month Treasury bills.

Canada — 3-month Treasury bills at tender.

Ireland — 3-month central bank exchequer bills at tender.

Italy — 6-month Treasury bills.

Japan — 60- to 62-day noninterest-bearing discount government bills.

Mexico — 3-month Federal Treasury bills.

Netherlands — 3-month Treasury bills.

New Zealand — tap issue rate for 3-month Treasury bills until December 1984. As of January 1985, 3-month Treasury bills at tender.

Philippines — simple average of 91-day Treasury bills at tender until June 1984. Beginning July 1984 rates refer to the weighted average interest rate on 91- to 183-day Treasury bills sold to banks under negotiated basis.

Singapore — 91-day Treasury bills at tender.

South Africa — 3-month Treasury bills at tender.

Spain — 3-month Treasury bill repos reported by the Bank of Spain until January 1988. As of February 1988 secondary market yield on 3-month Treasury notes (average of quotations during the month).

Sweden — new issues of 3-month Treasury bills until June 1982. New series as of July 1982, 6-month Treasury discount notes, market rate.

United Kingdom — 91-day Treasury bills at tender.

United States — 3-month Treasury bills.

Representative money-market rates

Australia — buying rate for 90-day bank accepted commercial bills.

Belgium — 4-month Fonds des Rentes certificates.

Canada — 3-month prime finance company paper.

Chile — central bank 60-day fixed rate promissory notes (PDBC) at tender.

France — 3-month interbank money against private paper.

Germany — 3-month interbank deposits.

Hong Kong — 3-month interbank deposits.

Indonesia — 1-month interbank deposits.

Ireland — 3-month interbank deposits.

Italy — 3-month interbank deposits.

Japan — 3-month "gensaki" rate.

Korea — 3-month financial bill.

Malaysia — 3-month interbank deposits.

Netherlands — 3-month interbank deposits.

New Zealand — 90-day commercial bills.

Philippines — weighted average interest rate for 90-day promissory rates.

Portugal — average of 30- to 90-day interbank deposits.

Singapore — 3-month banker's acceptances until July 1987. As of August 1987 3-month commercial bills.

South Africa — 90-day banker's acceptances.

Spain — 3-month interbank rate reported by the Bank of Spain (average of quotations during the month).

Switzerland — 3-month interbank deposits.

Taiwan — 90-day banker's acceptances.

Thailand — interbank call money.

United Kingdom — 3-month interbank deposits.

United States — 3-month prime industrial paper.

Commercial bank deposit rates

Argentina — nominal 30-day time deposits. Average of bank rates published by the central bank until August 1984. New series as of September 1984, 30-day acceptances maximum interest rate.

Austria — 3-month time deposits.

Australia — 3-month certificates of deposit.

Belgium — special maximum rate for 3-month time deposits in large amounts.

Brazil — 6-month certificates of deposit with prefixed yields until July 1982. New series as of August 1982, 6-month certificates of deposit reported as a spread above monetary correction which is set every month in relationship to inflation.

Canada — 3-month time deposits.

Chile — 30-day time deposits.

Denmark — time deposits of 3-months' notice.

Finland — time deposits of six-month notice.

France — 3-month time deposits of FF. 1,000,000.

Germany — 3-month time deposits in large amounts.

Hong Kong — negotiable 3-month time deposits of more than HK\$500,000.

Ireland — 3-month deposits.

Italy — 3-month time deposits of Lit. 100 million or more.

Japan — 90-day negotiable certificates of deposit issued by the Tokyo office of Morgan Guaranty Trust Company.

Korea — 3-month time deposits.

Malaysia — 3-month time deposits.

Mexico — 3-month certificates of deposit until September 1983. New series as of October 1983, 3-month promissory notes.

Netherlands — 3-month time deposits in large amounts.

New Zealand — 6-month transferable certificates of deposit.

Norway — 3-month special term deposits.

Philippines — weighted average interest rates on 60- to 90-day time deposits of sample commercial banks.

Portugal — 90- to 180-day time deposits until May 1984. New series as of June 1984, 180-day to one-year time deposits.

Key to data in tables — continued

Singapore — 3-month certificates of deposit.
South Africa — 3-month negotiable certificates of deposit.

Spain — deposits over 6 months and less than 1 year for Pts. 1 million or more reported by the Bank of Spain.

Sweden — 3-month certificates of deposit.

Switzerland — 3-month time deposits.

Taiwan — maximum rate for 3-month time deposits.

Thailand — 3-month time deposits.

United Kingdom — 3-month time deposits.

United States — 3-month negotiable certificates of deposit issued by Morgan Guaranty Trust Company.

Venezuela — 6-month negotiable certificates of deposit for domestic depositors only.

Domestic government bond yields

Austria — Austrian National Bank average yield on all outstanding government bonds.
Australia — secondary market yield for 10-year Treasury bonds.

Belgium — Belgium National Bank secondary market average yield on central government bonds of more than 5 years' maturity quoted on Brussels Stock Exchange.

Canada — Bank of Canada average yield on all direct government bonds due or callable in 10 years or more.

Denmark — 12% serial bonds maturing 2001 until April 1983. New series as of May 1983, 10% serial bonds maturing 2004.

Finland — rate of interest at issue on central government bonds intended for public subscription, weighted by sales of bonds in the latter half of each month.

France — INSEE secondary market weighted average yield of public sector bonds with a remaining maturity of 10 years or more.

Germany — Frankfurter Allgemeine Zeitung 10-year public authority bond average.

Ireland — 15-year government bonds.

Italy — average yield on fixed-interest government bonds, not including irredeemable bonds, weighted by the amounts in circulation, for maturities of 9 years or more.

Japan — secondary market average yield on Central government bonds with a maturity of 5 years or more.

Netherlands — Central Bureau of Statistics (CBS) average yield on three latest government bonds.

New Zealand — average yield on government bonds maturing after 5 years.

Norway — 5% government bond of 1996 until December 1982. New series as of January 1983, average yield of long-term government bonds.

Philippines — weighted average interest rate of outright sales on secondary transactions for central bank certificates of indebtedness.

Portugal — yield of 4% Centenary Loan of 1940.

South Africa — 25-year government bonds until August 1983; 20-year Republic of South Africa bonds until April 1984; new series as of May 1984, secondary market yield for the 13% due 2005 Republic of South Africa bond.

Spain — Bank of Spain secondary market weighted average yield of several central government issues with more than 2 years' maturity (average of quotations during the month).

Sweden — 15-year government bonds until October 1983. New series as of November 1983, 5-year government bond yield index, market rate.

Switzerland — Swiss Confederation bond average.

United Kingdom — F.T. (Financial Times) Actuaries 25-year government stock.

United States — Morgan Guaranty 20-year U.S. Government Bond Index until December 1982. As of January 1983 U.S. Treasury 30-year constant maturity index.

Venezuela — Banco Central average yield on public-sector bond issues.

Commercial bank lending rates to prime borrowers

Argentina — average rate on 30-day loans.
Austria — overdraft rate for prime borrowers, including commission.

Australia — overdraft rate. Maximum indicator rate applying to loans of A\$100,000 or more for major trading banks.

Belgium — prime overdraft rate.

Brazil — prefixed rate applied to working capital loans until July 1982; monetary-corrected free rate applied to working capital loans from August 1982 to July 1983. New series as of August 1983, maximum legal rate reported as a spread above monetary correction which is set every month in relationship to inflation. Charges for fees and commissions are often added.

Canada — prime rate.

Chile — average prime rate of six major commercial banks.

Denmark — approximate rate for loans and advances to prime borrowers.

Finland — average rates on total commercial bank lending.

France — base lending rate, excluding a commission of .05% per month on highest debit balance during the month. A spread above base rate is often added.

Germany — approximate effective overdraft rate for prime borrowers.

Hong Kong — prime lending rate set by the Hong Kong Association of Banks.

Indonesia — prime rate for domestic affiliates of foreign companies.

Ireland — AA corporate borrowing rate.

Italy — unsecured overdraft rate for prime borrowers.

Japan — standard rate of interest on short-term loans of especially high credit standing.

Korea — prime rate.

Malaysia — Bank of Commerce Berhad base lending rate.

Mexico — base rate or average cost of money for banks determined monthly by the Banco de Mexico S.A.

Netherlands — overdraft rate for prime borrowers, including commission.

New Zealand — overdraft rate for prime borrowers.

Norway — overdraft rate, including a commission of .25% per quarter on the total line of credit until January 1983. New series as of February 1983, special rate of first class, large borrowers.

Philippines — prescribed administrative ceiling for unsecured loans with maturities of 365 days and below, including charges until December 1982. New series as of January 1983, modal rate to prime borrowers.

Portugal — maximum rate for 90- to 180-day loans.

Singapore — most common overdraft rate, major banks.

South Africa — unsecured overdraft rate for prime borrowers.

Spain — private banks' average interest rate for 1-year loans reported by the Bank of Spain.

Sweden — overdraft rate for prime industrial borrowers, commission not included.

Switzerland — unsecured overdraft rate for prime borrowers, excluding commission of .25% per quarter on average or highest outstanding debit balance in quarter.

Taiwan — maximum rate for 3- to 12-month secured loans. Rate is an indication only and may vary from actual bank lending rate which is subject to volatile interbank rates.

Thailand — prime rate.

United Kingdom — clearing bank base lending rate. A spread above base rate is often added.

United States — prime rate of Morgan Guaranty Trust Company.

Venezuela — representative rate for domestic prime borrowers only.

Domestic corporate bond yields

Canada — McLeod, Young, Weir Co. Ltd., weighted long-term bond yield index for AA corporates.

France — INSEE secondary market weighted average yield of private company bonds with a remaining maturity of 10 years or more.

Germany — Bundesbank secondary market weighted average yield of industrial bonds with a remaining maturity of more than 3 years.

Japan — secondary market yield for industrial bonds.

Korea — average of yields on corporate bonds guaranteed by local banks, with an original maturity of 3- to 5-years.

Netherlands — CBS average yield on three 6%-6.5% corporate bonds until December 1981. As of January 1982, CBS secondary market weighted average yield on all commercial bank issues with a quotation between 92% and 103%.

Norway — 5.75% Dalen Portland-Cement bond of 1969-1984 until December 1982. New series as of January 1983 average yield of long-term industrial bonds.

Spain — Bank of Spain secondary market weighted average yield of several corporate issues with more than 3 years' maturity (average of quotations during the month).

Sweden — Central Statistical Bureau average yield on industrial bonds.

Switzerland — average yield on outstanding bonds of four leading Swiss companies. Mixture changed as of January 1982.

United Kingdom — Financial Times secondary market average yield of industrial and financial company debentures and loan stocks with an average of 25 years to maturity.

United States — Salomon Brothers Index of new issues yields for Aa industrial bonds with five-year call protection.

Venezuela — average of yields on 15-year bond issues of Electricidad de Caracas.

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